

Serial No. 10/630,623

Page 2

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

We Claim:

1. (original) An engine control system comprising:
a variable displacement internal combustion engine;
a plurality of cylinders located in said variable displacement internal combustion engine;
a plurality of fuel injectors for providing fuel to said plurality of cylinders;
a plurality of valves coupled to said plurality of cylinders, said plurality of valves controlling the air flow in and out of said plurality of cylinders;
an actuation apparatus for actuating said plurality of valves;
an intake manifold coupled to said variable displacement internal combustion engine;
a throttle coupled to said intake manifold;
a controller electronically coupled to said fuel injectors;
an accelerator pedal position sensor electronically coupled to said controller; and
wherein said controller determines the number of said cylinders to provide with fuel and air and a desired engine output torque based on a signal from said accelerator pedal position sensor and a hysteresis value.

2. (original) The engine control system of Claim 1 further comprising spark plugs for igniting said fuel provided by said fuel injectors.

3. (original) The engine control system of Claim 1 wherein said throttle is an electronic throttle.

Serial No. 10/630,623

Page 3

4. (original) The engine control system of Claim 1 wherein said accelerator pedal position sensor is an encoder.

5. (original) The engine control system of Claim 1 wherein said variable displacement internal combustion engine is a gasoline engine.

6. (original) The engine control system of Claim 1 wherein said variable displacement internal combustion engine includes at least two cylinders.

7. (original) The engine control system of Claim 1 wherein said variable displacement internal combustion engine is a V8 engine.

8. (original) The engine control system of Claim 1 wherein said actuation apparatus includes a decoupling apparatus that may couple and decouple from said plurality of valves.

9. (original) The engine control system of Claim 1 further including an airflow sensor to detect airflow through said intake manifold.

10. cancelled

11. cancelled

12. cancelled

13. cancelled

14. cancelled

15. cancelled

Serial No. 10/630,623

Page 4

16. (original) A method of controlling the displacement of a variable displacement internal combustion engine comprising the steps of:

measuring a variable indicative of pedal position for a variable displacement internal combustion engine;

generating a torque threshold that indicates a torque condition to vary the displacement of the variable displacement internal combustion engine;

providing a hysteresis value for the pedal position to reduce busyness; and

varying the displacement of the variable displacement internal combustion engine with reference to a variable indicative of pedal position and the hysteresis value.